



CITRUS MATURITY TEST RESULTS AND FRUIT SIZE

FEBRUARY FORECAST

Cooperating with the Florida Department and Agriculture and Consumer Services
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February 9, 2017

Florida All Orange Production Down 1 Percent from January Forecast
Florida Non-Valencia Orange Production Down 3 Percent
Florida Valencia Orange Production Unchanged
Florida All Grapefruit Production Unchanged
Florida All Tangerine and Tangelo Production Up 3 Percent
FCOJ Yield at 1.43 Gallons per Box (42° Brix)

| FORECAST DATES | | 2016-2017 SEASON | |
|----------------|--|------------------|--|
| March 9, 2017 | | May 10, 2017 | |
| April 11, 2017 | | June 9, 2017 | |
| | | July 12, 2017 | |

| Crop and State | Production ¹ | | 2016-2017 Forecasted Production ¹ | |
|---|----------------------------|----------------------------|--|---------------------------|
| | 2014-2015 (1,000 boxes) | 2015-2016 (1,000 boxes) | January (1,000 boxes) | February (1,000 boxes) |
| Non-Valencia Oranges ² | | | | |
| Florida | 47,400 | 36,100 | 36,000 | 35,000 |
| California ³ | 39,000 | 45,500 | 44,000 | 44,000 |
| Texas ³ | 1,170 | 1,351 | 1,450 | 1,450 |
| United States..... | 87,570 | 82,951 | 81,450 | 80,450 |
| Valencia Oranges | | | | |
| Florida | 49,550 | 45,500 | 35,000 | 35,000 |
| California ³ | 9,200 | 8,700 | 9,000 | 9,000 |
| Texas ³ | 282 | 340 | 350 | 350 |
| United States..... | 59,032 | 54,540 | 44,350 | 44,350 |
| All Oranges | | | | |
| Florida | 96,950 | 81,600 | 71,000 | 70,000 |
| California ³ | 48,200 | 54,200 | 53,000 | 53,000 |
| Texas ³ | 1,452 | 1,691 | 1,800 | 1,800 |
| United States..... | 146,602 | 137,491 | 125,800 | 124,800 |
| Grapefruit | | | | |
| Florida-All | 12,900 | 10,800 | 9,000 | 9,000 |
| White | 3,250 | 2,490 | 1,700 | 1,700 |
| Red | 9,650 | 8,310 | 7,300 | 7,300 |
| California ³ | 4,800 | 3,800 | 4,100 | 4,100 |
| Texas ³ | 4,250 | 4,800 | 5,300 | 5,300 |
| United States..... | 21,950 | 19,400 | 18,400 | 18,400 |
| Lemons ³ | | | | |
| California..... | 20,600 | 20,500 | 20,000 | 20,000 |
| Arizona..... | 2,000 | 1,750 | 1,550 | 1,550 |
| United States..... | 22,600 | 22,250 | 21,550 | 21,550 |
| Tangelos | | | | |
| Florida | 665 | 390 | (NA) | (NA) |
| Tangerines and Tangelos ⁴ | | | | |
| Florida-All | 2,265 | 1,415 | 1,520 | 1,560 |
| Early ⁵ | 1,445 | 785 | 620 | 630 |
| Royal ⁶ | (NA) | (NA) | 220 | 220 |
| Honey | 820 | 630 | 360 | 390 |
| Tangelo | (NA) | (NA) | 320 | 320 |
| California ³ | 18,700 | 21,700 | 23,000 | 23,000 |
| Arizona ⁷ | 170 | (NA) | (NA) | (NA) |
| United States..... | 21,135 | 23,115 | 24,520 | 24,560 |

NA Not available.

¹ Net pounds per box: oranges in California-80, Florida-90, Texas-85; grapefruit in California and Texas-80, Florida-85; lemons-80, tangelos-90; tangerines and mandarins in Arizona and California-80, Florida-95.

² Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas. Includes small quantities of Temples in Florida for 2014-2015 and 2015-2016.

³ Estimates carried forward from January.

⁴ Includes tangelos and tangors in California. Beginning in 2016-2017, includes tangelos in Florida.

⁵ Fallglo and Sunburst varieties.

⁶ Beginning in 2016-2017, Temples have been reclassified as Royal tangerines.

⁷ Estimates discontinued in 2015-2016.

Regressions

Regression data used are from the 2006-2007 through 2015-2016 seasons. All references to “average”, “minimum”, and “maximum” refer to these 10 seasons unless noted.

All Oranges 70.0 Million Boxes

The 2016-2017 Florida all orange forecast released today by the USDA Agricultural Statistics Board is lowered 1.00 million boxes to 70.0 million boxes. If realized, this will be 14 percent less than last season’s final production. The total includes 35.0 million boxes of the non-Valencia oranges (early, midseason, and Navel varieties) and 35.0 million boxes of Valencia oranges. For the previous 10 seasons used in the regressions, the February all orange forecast has deviated from final production by an average of 6 percent, with 4 seasons above and 6 below, and differences ranging from 15 percent below to 10 percent above.

Non-Valencia Oranges 35.0 Million Boxes

The forecast of non-Valencia production is lowered 1.00 million boxes to 35.0 million boxes. Size and Drop components were final last month. The Row Count survey conducted January 26-27, 2017, showed 72 percent of the early-midseason rows, and 83 percent of the Navel rows are harvested. Estimated utilization to February 1, with an allocation for non-certified fruit, is 25.9 million boxes. The Navel forecast, included in the non-Valencia portion of the forecast, remains at 900,000 boxes.

Valencia Oranges 35.0 Million Boxes

The forecast of Valencia production is unchanged at 35.0 million boxes. Current fruit size is close to the minimum and is projected to remain close to the minimum until harvest. Current droppage is below the maximum and projected droppage at 29 percent would be below the maximum at harvest.

All Grapefruit 9.00 Million Boxes

The forecast of all grapefruit production is unchanged at 9.00 million boxes. The red grapefruit forecast is unchanged at 7.30 million boxes, while the white grapefruit continues at 1.70 million boxes. Fruit size and drop are final in this report. Both white and red grapefruit sizes are less than the minimum. White grapefruit drop is higher than the maximum, while red grapefruit is just below the maximum set last season. The Row Count survey conducted January 26-27, 2017, indicated 41 percent of the red grapefruit rows and 29 percent of the white grapefruit rows are harvested.

Tangerines and Tangelos 1.56 Million Boxes

The forecast of all tangerine production is raised 40,000 boxes to 1.56 million boxes. The forecast of early tangerine varieties (Fallglo and Sunburst) is now 630,000 boxes with 230,000 boxes of Fallglo tangerines and 400,000 boxes of Sunburst tangerines. Harvest is relatively complete for these varieties this season. The Royal tangerine forecast is held at 220,000 boxes. The later maturing Honey tangerine forecast is raised to 390,000 boxes. Although final Honey fruit size is above last month’s projection, it is below average, requiring 320 pieces of fruit to fill a 1-3/5 bushel box. The final droppage rate of 46 percent is close to last month’s projection and below the maximum. Harvest of the Royal and Honey varieties is underway.

The tangelo forecast remains at 320,000 boxes. Estimated utilization to February 1 is 242,000 boxes, which includes an allocation for non-certified fruit. The Row Count survey conducted January 26-27, 2017, showed 53 percent of the rows are harvested.

FCOJ Yield 1.43 Gallons per Box

The projection for frozen concentrated orange juice (FCOJ) is lowered from 1.44 to 1.43 gallons per box of 42° Brix concentrate. Projections for the components are 1.34 gallons per box for the early-midseason portion, and 1.54 gallons per box for the late (Valencia) portion. Last season’s final yield, as reported by the Florida Department of Citrus were: 1.405527 gallons per box for all oranges, 1.347046 gallons per box for early-midseason oranges, and 1.472983 gallons per box for late (Valencia) oranges.

Forecast Components, by Type – Florida: February 2017

[Survey data is considered final in December for Navels, January for early-midseason oranges, February for grapefruit, and April for Valencia oranges]

| Type | Bearing trees (1,000 trees) | Fruit per tree (number) | Droppage (percent) | Fruit per box (number) |
|----------------------|--------------------------------|----------------------------|-----------------------|---------------------------|
| ORANGES | | | | |
| Early-midseason..... | 20,872 | 766 | 26 | 317 |
| Navel..... | 1,005 | 219 | 27 | 144 |
| Valencia..... | 28,925 | 450 | 29 | 241 |
| GRAPEFRUIT | | | | |
| White..... | 832 | 410 | 44 | 143 |
| Red..... | 3,092 | 393 | 36 | 132 |

Maturity

Regular bloom fruit samples were collected from groves on established routes January 26-27, 2017 in Florida's five major citrus producing areas and tested January 30, 2017. All comparisons are made to February 1, 2016. Solids (Brix) are higher on all varieties. Higher acid levels have resulted in lower ratios for early and late oranges. Midseason oranges have a lower acid and higher ratio. Unfinished juice per box is lower for all varieties while solids per box is higher for all varieties.

Indian River comparisons are made to fruit from other areas for this test period. Indian River late oranges have a higher acid level and solids (Brix) with a lower ratio. Unfinished juice per box is lower while solids per box is higher for late oranges in the Indian River District when compared to other areas.

Citrus Unadjusted Maturity Tests — Florida: 2015-2016 and 2016-2017

[Averages of regular bloom fruit from sample groves. Juice and solids per box are unadjusted and not comparable to juice processing plant test results. All samples were run through an FMC 091 machine using mechanical pressure only. This machine utilizes a .040 short strainer and standard 5/8 inch orifice tube. The beam settings are also identical to past tests and no restrictors are used]

| Fruit type (number of groves) test date | Acid | | Solids (Brix) | | Ratio | | Unfinished juice per box | | Solids per box | |
|---|-----------|-----------|------------------|-----------|-----------|-----------|-----------------------------|-----------|-------------------|-----------|
| | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 |
| | (percent) | (percent) | (percent) | (percent) | | | (pounds) | (pounds) | (pounds) | (pounds) |
| ORANGES | | | | | | | | | | |
| Early (23-31) | | | | | | | | | | |
| Sep 1 | 1.28 | 1.39 | 9.06 | 9.23 | 7.18 | 6.76 | 44.99 | 41.63 | 4.07 | 3.84 |
| Oct 1 | 0.93 | 0.99 | 9.55 | 9.30 | 10.39 | 9.59 | 55.00 | 48.99 | 5.25 | 4.56 |
| Nov 1 | 0.78 | 0.83 | 10.41 | 9.76 | 13.67 | 11.91 | 49.54 | 48.94 | 5.17 | 4.78 |
| Dec 1 | 0.68 | 0.75 | 10.80 | 10.80 | 15.92 | 14.56 | 51.24 | 49.65 | 5.53 | 5.36 |
| Jan 1 | 0.60 | 0.70 | 10.86 | 11.06 | 18.59 | 16.13 | 50.05 | 49.38 | 5.44 | 5.48 |
| Feb 1 | 0.63 | 0.68 | 11.50 | 11.75 | 18.52 | 17.32 | 50.74 | 49.78 | 5.84 | 5.86 |
| Midseason (20-10) | | | | | | | | | | |
| Sep 1 | 1.50 | 1.46 | 9.02 | 9.20 | 6.13 | 6.34 | 44.68 | 42.10 | 4.03 | 3.87 |
| Oct 1 | 1.12 | 1.04 | 9.30 | 9.07 | 8.70 | 8.90 | 49.05 | 44.89 | 4.56 | 4.07 |
| Nov 1 | 0.92 | 0.91 | 10.40 | 10.06 | 11.72 | 11.29 | 52.08 | 48.39 | 5.41 | 4.88 |
| Dec 1 | 0.76 | 0.84 | 10.97 | 10.57 | 14.80 | 12.64 | 52.08 | 52.52 | 5.70 | 5.55 |
| Jan 1 | 0.69 | 0.77 | 11.39 | 11.01 | 16.98 | 14.54 | 53.25 | 50.95 | 6.06 | 5.62 |
| Feb 1 | 0.75 | 0.74 | 11.75 | 11.86 | 16.09 | 16.31 | 51.21 | 51.09 | 6.03 | 6.05 |
| Late (143-148) | | | | | | | | | | |
| Sep 1 | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) | (NA) |
| Oct 1 | 1.91 | 1.99 | 8.58 | 8.83 | 4.55 | 4.52 | 48.35 | 46.01 | 4.15 | 4.07 |
| Nov 1 | 1.59 | 1.60 | 9.35 | 9.06 | 5.94 | 5.75 | 52.57 | 49.06 | 4.92 | 4.44 |
| Dec 1 | 1.30 | 1.42 | 9.74 | 10.07 | 7.56 | 7.18 | 54.75 | 52.34 | 5.33 | 5.27 |
| Jan 1 | 1.04 | 1.22 | 10.25 | 10.82 | 10.00 | 8.99 | 57.22 | 54.06 | 5.87 | 5.85 |
| Feb 1 | 0.97 | 1.09 | 10.66 | 11.48 | 11.19 | 10.64 | 55.93 | 55.47 | 5.96 | 6.37 |

NA Not available.

Citrus Maturity Test Averages, by Areas — Florida: February 1, 2015-2016 and 2016-2017

| Fruit type (number of groves) | Acid | | Solids (Brix) | | Ratio | | Unfinished juice per box | | Solids per box | |
|----------------------------------|-----------|-----------|------------------|-----------|-----------|-----------|-----------------------------|-----------|-------------------|-----------|
| | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 | 2015-2016 | 2016-2017 |
| | (percent) | (percent) | (percent) | (percent) | | | (pounds) | (pounds) | (pounds) | (pounds) |
| ORANGES | | | | | | | | | | |
| Late | | | | | | | | | | |
| Indian River (26-29) | 1.00 | 1.13 | 11.09 | 11.86 | 11.25 | 10.55 | 56.31 | 55.03 | 6.25 | 6.52 |
| Other Areas (117-119) | 0.96 | 1.08 | 10.56 | 11.39 | 11.18 | 10.67 | 55.85 | 55.58 | 5.90 | 6.33 |

Fruit Size Comparisons by Types to Previous Seasons

Size frequency distributions from the January size survey are shown in the following table. The distributions are by percent of fruit falling within the size range of each 4/5-bushel container. These frequency distributions include fruit from regular bloom and exclude off-bloom fruit.

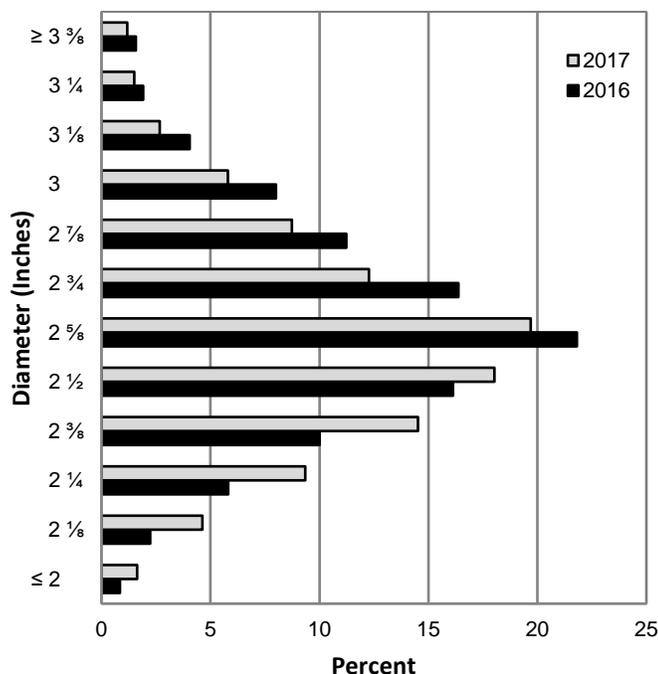
Citrus Size Frequency Measurement Distributions, by Type — Florida: January Survey

| Type and number of fruit per 4/5 – bushel containers | 2015 | 2016 | 2017 | Type and number of fruit per 4/5 – bushel containers | 2015 | 2016 | 2017 |
|--|-----------|-----------|-----------|--|-----------|-----------|-----------|
| | (percent) | (percent) | (percent) | | (percent) | (percent) | (percent) |
| VALENCIA ORANGES | | | | WHITE GRAPEFRUIT ¹ | | | |
| 64 or less | 1.9 | 5.2 | 3.9 | 32 or less | 5.9 | 3.1 | 0.7 |
| 80 | 11.5 | 15.3 | 11.0 | 36 | 10.6 | 5.9 | 3.1 |
| 100 | 30.4 | 32.8 | 25.5 | 40 | 14.2 | 9.2 | 5.8 |
| 125 | 32.3 | 27.8 | 29.5 | 48 | 18.3 | 11.9 | 11.9 |
| 163 or more | 23.9 | 18.9 | 30.1 | 56 | 14.0 | 13.0 | 13.6 |
| | | | | 63 or more | 37.0 | 56.9 | 64.9 |
| HONEY TANGERINES | | | | RED GRAPEFRUIT | | | |
| 80 or less | 12.3 | 14.2 | 8.7 | 32 or less | 3.8 | 2.9 | 1.0 |
| 100 | 15.6 | 23.8 | 22.9 | 36 | 9.3 | 7.2 | 4.6 |
| 120 | 19.2 | 24.9 | 24.6 | 40 | 14.8 | 11.5 | 7.2 |
| 176 | 11.8 | 12.3 | 16.9 | 48 | 16.4 | 15.7 | 15.2 |
| 210 or more | 41.1 | 24.8 | 26.9 | 56 | 12.1 | 13.1 | 14.6 |
| | | | | 63 or more | 43.6 | 49.6 | 57.4 |

¹ Excludes seedy.

The charts below show the distribution of fruit sizes in 2016 compared to 2017. The diameter measurements shown are the minimum values of each eighth inch range, except for the smallest value.

Fruit Size Frequency Measurements, Valencia Oranges, by Diameter - Florida: January Survey



Fruit Size Frequency Measurements, Red Seedless Grapefruit, by Diameter - Florida: January Survey

